

## **Notice of Intent to Release a Solicitation for NASA Discovery Investigations Extended Version – January 2004**

The National Aeronautic and Space Administration (NASA) Office of Space Science (OSS) intends to release an Announcement of Opportunity (AO) no earlier than February 15, 2004, to solicit proposals for investigations through the Discovery Program. The Discovery missions meet the goals of planetary system(s) exploration encompassing the scientific objectives of the NASA Solar System Exploration (SSE) theme (excluding Mars) and the search for extrasolar planetary systems element of the NASA Astronomical Search for Origins (ASO) theme. Proposals in response to this Discovery AO will be due 90 days after its formal release. A Discovery Preproposal Conference will be held two weeks after the AO release in a Washington DC location.

The Discovery Program selects missions through a fully open and competitive process. Investigation teams are to be led by a single Principal Investigator (PI), with participation open to all categories of organizations both foreign and domestic, including educational institutions, industry, nonprofit organizations, NASA Centers, the Jet Propulsion Laboratory (JPL), and other Government agencies. Principal Investigators (PIs) are responsible for and allowed to assemble the mission team from any and all of these organizations.

This intended Discovery AO will solicit two types of flight investigations:

- 1) Discovery investigations for which the PI is responsible for a complete space flight investigation including the experiment hardware, the spacecraft, launch services, all mission operations, and data analysis. These investigations are capped at an OSS cost of \$360M (Fiscal Year (FY) 2004) and must be launched no later than June 30, 2009. Furthermore, schedules must be such that launch occurs within 35 months from the start of the investigation design/development phase (Phase C/D).
- 2) Discovery Mission of Opportunity investigations are part of non-OSS space missions of any size that will be launched no later than June 30, 2009, that require a commitment from NASA before December 31, 2005, that may be accomplished within a cost to NASA OSS of \$35M (FY 2004) and that address any of the OSS SSE science objectives except those of the study of Mars.

Important features of this intended Discovery AO are anticipated to include the following:

- Each of the selected mission investigation teams will be funded to perform a Phase A Concept Study of up to 6 months at a level up to \$1M in Real Year (RY) dollars, which must be budgeted in the initial proposal. NASA will review these Concept Studies with the expectation of confirming one investigation for flight.
- One or more Mission of Opportunity investigations may also be selected. If a Concept Study is deemed necessary for selected Mission of Opportunity investigation(s), funding will not exceed \$250K (RY) per selected investigation.
- Discovery teams will be responsible for collecting the scientific, engineering, and ancillary information necessary to validate and calibrate the scientific data prior to timely delivery to the Planetary Data System (PDS). There shall be no proprietary data rights period for Discovery investigations.
- Investigation teams must include an adequately funded data analysis period, independent of PDS archiving activities, as a part of their Phase E activities. Data analysis should be understood to include the publication of scientific results of the investigation in refereed journals.
- Options for extended missions (Phase F) may be included in proposals. Phase F costs need not be included in the NASA OSS Cost, but should be included in appropriate detail. The inclusion of such options does not, however, imply a commitment from NASA to exercise them.

- The cost of any Participating Scientist Programs (PSP's), Data Analysis Programs (DAP's), and Guest Observer (GO) Programs, initiated no earlier than Phase E, must be included in the NASA OSS Cost estimate.
- Education and Public Outreach (E/PO) is an integral element of the Discovery Program, with 1-2% of the NASA OSS Cost (excluding launch vehicles) allocated to E/PO activities. Detailed E/PO implementation plans will be developed by each selected investigation during the Concept Study.
- Plans for Small Disadvantaged Business (SDB) and minority institutions should be included consistent with NASA's goals for participation for these organizations. Detailed SDB implementation plans will be developed by each investigation during the Concept Study.
- Radioisotope sources of electrical power, such as Radioisotope Thermoelectric Generators (RTG's), are not permitted. Other, smaller, radioactive sources (e.g., radioactive heating units (RHU's) and/or science instrument sources) are permitted subject to NEPA and launch approval regulations. Procurement and Environmental Assessment costs must be included.
- Full cost accounting practices must be used in developing the NASA OSS Cost.
- Contributions of any kind, cash or non-cash (property and services) by organizations other than OSS are welcome. Contributions to Discovery investigations may not exceed one third (1/3) of the proposed NASA OSS cost for the mission design/development phase (Phase C/D).
- International participation may include the contribution of scientific instruments, the spacecraft (or a portion thereof), and the subsequent sharing of the data from the mission, all on a no-exchange-of-funds basis. Appropriate letters and signatures will be required at the time of proposal.
- Discovery Mission investigations may be launched as primary payloads on expendable launch vehicles (ELV's). Although NASA will fund launch service costs directly, these costs must be included in the proposed NASA OSS cost.

The following schedule summarizes the anticipated major milestones of this Discovery AO:

AO release.....	No earlier than mid February 2004
Preproposal Conference.....	AO Release + 2 weeks
Notice of Intent due.....	AO Release + 6 weeks
Proposal deadline, 4:30 p.m. ET.....	AO Release + 90 days
Non-U.S. Letter of Endorsement due (with proposal) .....	Proposal Receipt
Selections announced (target) .....	Proposal Receipt +150 days
Concept Study due (target).....	6 months after Concept Study Kick-Off
Downselect (target) .....	3 months after Concept study Receipt

Note that the Discovery AO may contain provisions that differ from this Notice, in which case those in the AO will take precedence. Questions or comments about this intention to release a Discovery AO may be addressed to the NASA Discovery Program Scientist:

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